

the primary care provider ($r(177)=-0.43$, $p<0.001$), but not with expectations for MUS improvement ($r(178)=-0.05$, $p=0.55$). **CONCLUSIONS:** The findings indicate that addressing perceptions of disagreement (and potentially actual disagreement) with the provider will be an important intervention target, but that veterans' expectations for improvement and therefore potentially their actual improvement may be difficult to change.

PHS87

ESTIMATING LONG-TERM FUNCTIONAL IMPAIRMENTS OF RHEUMATOID ARTHRITIS: INTEGRATION OF NATIONWIDE SURVIVAL WITH HEALTH ASSESSMENT FROM CLINICAL COHORT

Hung MC¹, Chiu YM², Hwang JS³, Wang JD⁴

¹Department of Public Health, National Cheng Kung University Medical College, Tainan, Taiwan, ²Changhua Christian Hospital, Changhua City, Changhua County, Taiwan, ³Institute of Statistical Science, Academia Sinica, Taipei, Taiwan, ⁴National Cheng Kung University College of Medicine, Tainan, Taiwan

OBJECTIVES: The lifetime functional impairments associated with rheumatoid arthritis (RA) have received little attention in the literature. This study determines the dynamic changes of different physical functional impairments over time and their total duration after RA diagnosis. **METHODS:** We used a population-based cohort consisting of 39,455 incident RA patients in Taiwan between 1998 and 2009 to estimate the survival functions and extrapolate to lifetime through a semi-parametric method. The Health Assessment Questionnaire Disability Index (HAQ-DI) was used to measure impairment items and levels in 394 consecutive patients at three clinics for the period 2011-2012. A HAQ-DI score over 1.5 was considered as suffering from severe disability. Lifetime functional impairments were obtained by extrapolating the gender and age-stratified survival functions to lifetime, and then multiplying them with the proportions of different kinds of functional impairments over time. **RESULTS:** On average, RA patients had 5.40, 15.05, and 2.36 years with no, moderate, and severe disability, respectively. In RA patients diagnosed at the ages of <50, 50-64, and ≥65 were expected to have 23.02, 15.03, and 8.46 years living with disabilities, which would be about 76.1%, 75.3% and 77.7% of his/her life expectancy, respectively. A higher proportion of females suffered from functional disabilities than males, at 78.7% and 59.2%, respectively. The most common functional impairments were reach and grip. **CONCLUSIONS:** RA patients suffer from functional disabilities over three-fourths of their remaining lifetime, and are in need of long-term care.

PHS88

PATIENTS' PERCEPTIONS OF PHYSICIANS' CARING ATTITUDE IS THE CRITICAL FACTOR IN DETERMINING PATIENT SATISFACTION

Park C¹, Kim N², Chung J³, Feldman SR⁴, Balkrishnan R⁵, Chang J⁶

¹The University of Texas at Austin, Austin, TX, USA, ²Sookmyung Women's University, Seoul, South Korea, ³Boston University, Boston, MA, USA, ⁴Wake Forest University, Winston-Salem, NC, USA, ⁵University of Michigan, Ann Arbor, MI, USA, ⁶Samford University, Birmingham, AL, USA

OBJECTIVES: Patient satisfaction is a crucial component of better health care outcomes. Recently, many patients voluntarily started to report their satisfaction on physicians using the Internet. Given these, there is need to evaluate the relationship between physicians' attitude and patients' satisfaction using the recent web-based survey data. **METHODS:** Data from a cross-sectional survey on the ratings of physicians using a convenience sampling were used to examine the relationship between physicians' attitudes and patients' satisfaction. The independent variable was the physician's attitude, and the dependent variables were patients' satisfaction with the physician and patients' satisfaction with the office setting. **RESULTS:** A total of 273,994 patients were included. The average (standard deviation, SD) of patients' satisfaction with the physician was 78.08 (0.14), and the average (SD) of patients' satisfaction with the office setting was 78.62 (0.12) out of 100. Physicians' attitude was a significant predicting factor on patients' satisfaction with the physician ($b = 8.71$, $p < 0.001$) and the office setting ($b = 7.03$, $p < 0.001$). The predictor variables (physicians' attitudes and covariates) accounted for 92.5% of the variance on satisfaction with their physicians. Additionally, both longer waiting times to get an appointment to see physicians and to see physicians after arriving at the office were highly correlated with lower patients' satisfaction with their physicians ($\rho = -0.26$, $p < 0.001$ and $\rho = -0.32$, $p < 0.001$, respectively) and the office setting ($\rho = -0.43$, $p < 0.001$ and $\rho = -0.50$, $p < 0.001$, respectively). **CONCLUSIONS:** There is a strong relationship between perceptions of physicians' friendliness/caring and patients' satisfaction. Empathy skills can be significantly increased after taking targeted educational programs. To facilitate patients' satisfaction with health care, a continuous effort to develop empathic ability of physicians should be undertaken so that patients perceive their empathic physicians.

PHS89

THE IMPORTANCE OF METHODOLOGY IN REPORTING PERFORMANCE INDICATORS

Chen M

OBJECTIVES: The aim of this research is to use two public reporting methods to compare and contrast institutional performance by analyzing, as an example, a patient satisfaction indicator, namely, percentage of patients who would definitely recommend the emergency department (ED) to their friends and family. **METHODS:** There are a multitude of ways to evaluate hospital results on patient satisfaction in ED. A standard approach sets a target to gauge hospital performance. Values above the target/benchmark meet or exceed expectations, while those institutions below the target may consider initiatives and programs to improve their patient satisfaction score. An alternative method is the use of funnel plots that assess the relationship between the outcome measure (patient satisfaction score) and volume of cases across disparate facilities when evaluating institutional performance. Allowances are made for hospitals falling within a band, called control limits, that adjusts for precision. **RESULTS:** From April 2010 to March 2011, 99 Ontario hospitals reported

their scores of a NRC-Picker patient satisfaction survey question. A funnel plot was constructed using a benchmark (70.6%). In all, 45(45%) institutions performed within expected variation, that is within or above the 99.8% control limit, and 54(55%) fell below the lower 99.8% control limit. When we simply use the 70.6% target without any control limits, 19 facilities exceeded the threshold, while 80 fell below it. Divergence in reporting occurred where 26 institutions met the 99.8% control limits set by the funnel plot, but fell below the benchmark set when using a fixed target of 70.6%. **CONCLUSIONS:** The two approaches lead to different conclusions on hospital performance for 26 (26%) institutions. The first method compared hospital scores against a target or preset benchmark while the second approach used funnel plots to interpret institutional performance with greater precision by taking into account variation via sample size.

PHS90

THE CLIENTS' VOICE: SATISFACTION WITH HIV/AIDS CARE IN A PUBLIC AND PRIVATE HEALTH FACILITY IN KABALE DISTRICT, UGANDA

Kwesiga D¹, Kiwanuka S², Kiwanuka N², Mafigiri D³, Kakande N⁴

¹Global Health Economics, ²Makerere School of Public Health, ³Makerere University School of Social Sciences, ⁴Joint Clinical Research Centre

OBJECTIVES: In Uganda in 2008, about 121,218 people were on Antiretroviral therapy, which was 40% of all persons eligible for it then. Despite increasing availability and accessibility to HIV/AIDS care services, little information is available on clients' thoughts about the services. This cross-sectional study was done to determine client satisfaction with quality of HIV/AIDS care services in a public and a private health facility in Kabale district, south western Uganda. **METHODS:** 216 client exit interviews were conducted in two clinics in Kabale district, south western Uganda using the SERVQUAL tool. Data were analyzed by looking at differences in mean scores between clients' expectations and perceptions. Paired t-tests and chi-square tests were done. **RESULTS:** Clients were dissatisfied with HIV/AIDS care in both health facilities, with the overall average score of -0.06. The public health facility scored -0.09 and the private scored -0.03. In both facilities and overall, tangibles was rated worst (overall score of -0.16) and responsiveness was rated best. Drug shortages were frequent and caused dissatisfaction. **CONCLUSIONS:** The findings suggested that quality of HIV/AIDS care in Kabale was lacking. They indicate that managers and policy makers need to pay more attention to it, especially physical facilities, equipment, ability of service providers to perform the service accurately, and drug shortages. Future research can be done on a larger scale within the district and beyond.

PHS91

LEAN "INFLOW" CHANGE MAY IMPROVE PRIMARY CARE PATIENT SATISFACTION: A PILOT STUDY

Chen PH, Wong E, Hung D

Palo Alto Medical Foundation, Mountain View, CA, USA

OBJECTIVES: This study examines the impact of Lean "inflow" change on patient satisfaction at a primary care pilot clinic location of a large, multispecialty health care provider in Northern California undergoing system-wide transformation. **METHODS:** The health care provider serving 2+ million patients has invested a significant amount of resources in Lean management to transform the way primary care is delivered. The Press Ganey (PG) outpatient survey was used. The monthly PG score, covering a two-year period, compared pre and post-implementation of Lean in the pilot site relative to two comparison sites. Monthly site differences between pilot and comparators in median PG scores were calculated as the dependent variable. Segmented regression with a breakpoint at the start of the intervention was used to analyze departmental PG scores over time, adjusting for clinical FTE and autocorrelation. **RESULTS:** Relative to comparator 1, there was a significant trend post Lean implementation of 0.2 percentage point per month ($p=0.002$) in pilot site Internal Medicine and 0.1 percentage point per month ($p=0.004$) in pilot site Pediatrics. There were significant trends post Lean implementation of 0.5 percentage point per month ($p<0.001$) in pilot site Family Medicine and Pediatrics relative to comparator 2. Besides, there was an immediate and 2 percentage points ($p<0.001$) increase in pilot site relative to comparator 2 at the intervention month. **CONCLUSIONS:** Lean "inflow" changes had improved patient satisfaction in pilot site Pediatrics by 1.9 and 7.5 percentage points relative to two comparators, respectively. Patient satisfaction in pilot site was estimated to increase by 2.7 percentage points relative to comparator 1 for Internal Medicine and 7.6 percentage points relative to comparator 2 for Family Medicine after Lean was implemented, based on the trend of site differences in the preceding year. Overall, Lean "inflow" change seemed to improve primary care patient satisfaction.

PHS92

BELIEFS IN THE EFFECTIVENESS OF SMOKING CESSATION INTERVENTIONS AMONG MALE SAUDI COLLEGE STUDENTS

Almogbel YS, Abughosh S, Sansgiry SS

University of Houston, Houston, TX, USA

OBJECTIVES: Several pharmacological and behavioral interventions have been implemented to help smokers with smoking cessation efforts. However, smoking still persists as there may be a lack of belief in the effectiveness of these interventions. The objective of this study was to identify predictors that affect belief in the effectiveness of smoking cessation interventions among male Saudi college students. **METHODS:** A non-experimental cross-sectional study of male college students was conducted in two cities in the Kingdom of Saudi Arabia. A pre-tested, validated survey was used to evaluate factors affecting beliefs in the effectiveness of smoking cessation interventions, such as socio-demographics, academic performance, and status of smoking. Beliefs about cessation medications or behavioral cessation programs were assessed via a pre-validated Likert scale. Data was collected between December 2011 and January 2012. Descriptive and regression analyses were conducted. **RESULTS:** A total of 337 surveys were received (response rate of 36.6%). About 31% of respondents were self-identified smokers. The average age of respondents was 22.6 (± 2.2) years. The majority of